Application No. 09/944,884
 Amendment dated November 12, 2003
 Reply to Office Action of August 11, 2003

This listing of Claims will replace all prior versions and listings of Claims in the application:

## **Listing of Claims:**

Claims 1-24 (Cancelled)

- Claim 25 (Currently Amended) The An isolated nucleic acid of Claim 22 encoding a polypeptide which stimulates release of proteoglycans from cartilage tissue and having at least 95% nucleic acid sequence identity to:
- (a) a nucleic acid sequence encoding the polypeptide shown in Figure 2 (SEQ ID NO:2);
- (b) a nucleic acid sequence encoding the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
- (c) a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2);
- (d) a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
  - (e)(c) the nucleic acid sequence shown in Figure 1 (SEQ ID NO:1);
- (f)(d) the full-length coding sequence of the nucleic acid sequence shown in Figure 1 (SEQ ID NO:1); or
- (g)(e) the full-length coding sequence of the cDNA deposited under ATCC accession number 209526.
- Claim 26 (Currently Amended) The isolated nucleic acid of Claim 22 25 encoding a polypeptide which stimulates release of proteoglycans from cartilage tissue and having at least 99% nucleic acid sequence identity to:
- (a) a nucleic acid sequence encoding the polypeptide shown in Figure 2 (SEQ ID NO:2);
- (b) a nucleic acid sequence encoding the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

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  - (c) a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2);
  - (d) a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
    - (e)(c) the nucleic acid sequence shown in Figure 1 (SEQ ID NO:1):
  - (f)(d) the full-length coding sequence of the nucleic acid sequence shown in Figure 1 (SEQ ID NO:1); or
  - (g)(e) the full-length coding sequence of the cDNA deposited under ATCC accession number 209526.
    - Claim 27 (Currently Amended) An isolated nucleic acid comprising:
  - (a) a nucleic acid sequence encoding the polypeptide shown in Figure 2 (SEQ ID NO:2);
  - (b) a nucleic acid sequence encoding the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
  - (c) a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2);
  - (d) a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
    - (e)(c) the nucleic acid sequence shown in Figure 1 (SEQ ID NO:1);
  - (f)(d) the full-length coding sequence of the nucleic acid sequence shown in Figure 1 (SEQ ID NO:1); or
  - (g)(e) the full-length coding sequence of the cDNA deposited under ATCC accession number 209526.
  - Claim 28 (Currently Amended) The- An isolated nucleic acid of Claim 27 comprising a nucleic acid sequence encoding the polypeptide shown in Figure 2 (SEQ ID NO:2).
  - Claim 29 (Currently Amended) The- An\_isolated nucleic acid of Claim 27 comprising a nucleic acid sequence encoding the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide.

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Claims 30-31 (Cancelled)

- Claim 32 (Currently Amended) The An isolated nucleic acid of Claim 27 comprising the nucleic acid sequence shown in Figure 1 (SEQ ID NO:1).
- Claim 33 (Currently Amended) The An isolated nucleic acid of Claim 27 comprising the full-length coding sequence of the nucleic acid sequence shown in Figure 1 (SEQ ID NO:1).
- Claim 34 (Currently Amended) The An isolated nucleic acid of Claim 27 comprising the full-length coding sequence of the cDNA deposited under ATCC accession number 209526.
- Claim 35 (Currently Amended) An isolated nucleic acid that hybridizes <u>under high stringency conditions</u> to:
- (a) a nucleic acid sequence encoding the polypeptide shown in Figure 2 (SEQ ID NO:2);
- (b) a nucleic acid sequence encoding the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
- (c) a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 2 (SEQ ID-NO:2);
- (d) a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
  - (e)(c) the nucleic acid sequence shown in Figure 1 (SEQ ID NO:1);
- (f)(d) the full-length coding sequence of the nucleic acid sequence shown in Figure 1 (SEQ ID NO:1); or
- (g)(e) the full-length coding sequence of the cDNA deposited under ATCC accession number 209526.
- Claim 36 (Currently Amended) The isolated nucleic acid of Claim 35, wherein said hybridization occurs under stringent high stringency conditions selected from the group consisting of:

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- (a) 0.015 M sodium chloride/0.0015 M sodium citrate/0.1% sodium dodecyl sulfate at 50°C;
- (b) 50% (v/v) formamide with 0.1% bovine serum albumin/0.1% Ficoll/0.1% polyvinylpyrrolidone/50mM sodium phosphate buffer at pH 6.5 with 750 mM sodium chloride, 75 mM sodium citrate at 42°C; and
- (c) 50% formamide, 5 x SSC (0.75 M sodium chloride, 0.075 M sodium citrate), 50 mM sodium phosphate (pH 6.8), 0.1% sodium pyrophosphate, 5 x Denhardt's solution, sonicated salmon sperm DNA (50 μg/ml), 0.1% sodium dodecyl sulphate, and 10% dextran sulfate at 42°C, with washes at 42°C in 0.2 x SSC (0.75 M sodium chloride, 0.075 M sodium citrate) and 50% formamide at 55°C, followed by a high-stringency wash consisting of 0.1 x SSC (0.75 M sodium chloride, 0.075 N sodium citrate) containing EDTA at 55°C.
- Claim 37 (Currently Amended) The isolated nucleic acid of Claim 35 which is at least 40 35 nucleotides in length.
- Claim 38 (Currently Amended) An isolated vector comprising the nucleic acid of Claim 22 25.
- Claim 39 (Currently Amended) The <u>isolated</u> vector of Claim 38, wherein said nucleic acid is operably linked to control sequences recognized by a host cell transformed with the vector.
- Claim 40 (Currently Amended) An isolated host cell comprising the vector of Claim 38.
- Claim 41 (Currently Amended) The <u>isolated</u> host cell of Claim 40, wherein said cell is a CHO cell, an *E. coli* or a yeast cell.

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Please add the following new claims:

Claim 42 (New) An isolated nucleic acid comprising a sequence that encodes a polypeptide of SEQ ID NO:2 with conservative amino acid substitutions, wherein the polypeptide stimulates release of proteoglycans from cartilage.

Claim 43 (New) An isolated nucleic acid comprising a sequence that encodes a polypeptide of SEQ ID NO:2 with 0-10 amino acid additions, deletions, or substitutions, wherein the polypeptide stimulates release of proteoglycans from cartilage.